Department of Economics

The MIT Economics Department is widely regarded as one of the world’s premier institutions for economics research and education.

The faculty balance substantial commitments to training both undergraduates and doctoral students with active and influential research programs. With one of the youngest senior faculties among its peer institutions, the department plays a central role as an innovator in economics research and a source of exciting new directions in undergraduate and graduate economics education.

Highlights

The highlight of the past year was Bengt Holmström’s receipt of the 2016 Nobel Prize in Economics. The 2016 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, was awarded jointly to Holmstrom and to Oliver Hart of Harvard University for their research on contract theory. Their pioneering work opened up a broad field of inquiry that studies incentives within organizations, the optimal design of contracts between employers and employees, and the role of asymmetric information in other settings.

Many other members of the faculty received important honors and recognition. Alberto Abadie, Jonathan Gruber, and Parag Pathak were elected as fellows of the Econometric Society. Daron Acemoglu won the 2017 BBVA Foundation Frontiers of Knowledge Award for Economics, Finance, and Management, and was named a Carnegie fellow. Dave Donaldson, an MIT faculty member from 2009 until 2014, and who rejoined the faculty in July 2017, received the John Bates Clark Medal from the American Economic Association as the outstanding American economist under the age of 40. Isaiah Andrews and Alp Simsek were awarded National Science Foundation CAREER grants. Esther Duflo was elected to the National Academy of Sciences. Olivier Blanchard was elected president of the American Economic Association. Drew Fudenberg is currently serving as president of the Econometric Society. John Van Reenen was named an officer of the Order of the British Empire in Queen Elizabeth II’s New Year’s Honours list.

Undergraduate Education

Undergraduate enrollments in Economics are increasing. The department has launched two new majors within the department—one in fall 2016 and a second in fall 2017—and is pursuing a number of initiatives to attract new majors and reorient its program toward nonmajors. The total number of students taking Course 14 classes rose modestly from 1,695 in AY2016 to 1,751 in AY2017.

In fall 2016, the department launched a new major in mathematical economics. It is designed to serve students seeking deep and broad training in both economics and mathematics. These skills dovetail with multiple components of economics. On the applied side, the mathematical economics major gives students the opportunity to develop further the big data skills that are increasingly in demand. For theoretically inclined students, the major enables students to delve deeply into the terrain where economic theory and pure mathematics work hand in hand. Sixteen students have enrolled as mathematical economics majors, significantly exceeding expectations for the major’s first year.
In fall 2017, the department will launch a second undergraduate major in computer science, economics, and data science. Run in collaboration with the Department of Electrical Engineering and Computer Science, the new major aims to give students the skills to identify, analyze, and solve real-world challenges in both real and virtual settings. Students will gain foundational knowledge in economic analysis, computing, optimization, and data science, as well as hands-on experience with empirical analysis of economic data. A central motivation for the new major is the rise of contemporary, electronically mediated platforms for market-level and individual exchange that combine complex human decisions with intensive computation and data processing, all of which operate within an engineered economic environment. Examples include online markets, crowdsourcing platforms, spectrum auctions, financial platforms, cryptocurrencies, and large-scale matching and allocation systems such as kidney exchanges and public school choice systems.

The department has also innovated in online education. In AY2016, Sara Fisher Ellison and Esther Duflo launched 14.31/14.310, Data Analysis for Social Science. This ambitious class provides students with a mathematically rigorous introduction to statistics and a practical understanding of a number of techniques that are commonly used in the social sciences, all in the course of a single semester. In September 2016, MIT debuted 14.310x, the edX version of this class. In spring 2017, Professors Ellison and Duflo were honored as one of three winning groups of co-instructors of the inaugural MITx Prize for Teaching and Learning in MOOCs (massive open online courses) by MIT’s Office of Digital Learning. This award recognized educators who have devoted themselves to better engaging learners around the world through digital classrooms. The duo was selected for their balance of rigor and accessibility in helping students acquire and develop big data skills via the edX platform.

After drawing a large audience and achieving superb ratings when he first offered an eight-lecture, Independent Activities Period class on the economics of the financial crisis, Alp Simsek offered the class again this year. This class gives nonmajors an opportunity to master material that would normally be seen only in an upper-level elective. Professor Simsek is also set to teach a new class in intermediate macroeconomics, 14.07 Financial Markets and the Macroeconomy, which will debut in fall 2017.

The department has introduced several other classes to refresh the curriculum, expand undergraduate outreach, and support the two new economics majors. For example, 14.18 Mathematical Economic Modeling, offered in fall 2016, introduces students to the process of writing research papers in economic theory. This class is a communication intensive subject in the major (CI-M) option and a capstone for the mathematical economics major. Also introduced in fall 2016 was 14.73 The Challenge of World Poverty, a newly redesigned communication intensive subject in the humanities, arts, and social sciences (CI-H), taught by Esther Duflo and Frank Schilbach. The CI-H designation allows more first-year students to gain exposure to economics before they have to select a major. The department also has put a great deal of effort into staffing 14.01 Principles of Microeconomics and 14.02 Principles of Macroeconomics classes with faculty and graduate students who are compelling teachers. Ratings for these class have improved, but it is too early to know if they will inspire more students to select economics as a major. Commencing with fall 2016, we began allowing students with advanced high school training to enroll in 14.03 Microeconomic Theory and Public Policy in place of 14.01 Principles of Microeconomics.
The MIT Undergraduate Economics Association (UEA) continues to support outside-the-classroom economics education. The UEA sponsored a public lecture on November 1, 2016 by Nobel Laureate Eric Maskin, who is the Adams University Professor at Harvard. Maskin spoke about different electoral rules and how mechanism design theory can help to improve the democratic process of presidential elections. This well-attended lecture attracted undergraduate majors, faculty members, graduate students, and economics-curious attendees from throughout the MIT community.

The Undergraduate Economics Association presented its faculty teaching award to Joshua Angrist and its graduate student teaching award to Enrico Cantoni. This year, Class of 2017 graduates Jennifer Lohmeier and Connor Popik were co-winners for first prize in the UEA Journal.

Graduate Education

The department’s graduating PhD students had an excellent placement year, with new graduates joining the faculties at Harvard University, the University of Chicago, Northwestern University, and the London School of Economics, among many other excellent institutions. Students also accepted positions at leading nongovernmental organizations, Internet firms, and private sector finance and consulting organizations. Two MIT students were selected this spring to participate in the Review of Economic Studies tour, which honors the top seven US job market candidates each year with a European speaking tour. With regard to PhD admissions, the department received 716 applications. Only 25 prospective students were offered admission, and 20 were accepted and enrolled. The group of newly enrolled students includes seven women and nine international students.

Several faculty members and students were recognized during the past year for their outstanding service to the Economics Department and MIT. Heidi Williams won the Graduate Economic Association’s (GEA) Award for Best Professor, and Alp Simsek was honored as Outstanding Dissertation Advisor. Graduate student Harry Di Pei was honored as the Outstanding Teaching Assistant by the GEA. The Robert Solow Prize for Excellence in Teaching and Research was awarded to Vivek Bhattacharya and Peter Hull.

The department and the Abdul Latif Jameel Poverty Action Lab (J-PAL) announced an innovative online MITx MicroMasters credential in data, economics, and development policy (DEDP), as well as a unique blended MIT master’s program in DEDP. The DEDP MicroMasters combines online learning with one semester in residence at MIT. It equips learners with the practical skills and theoretical knowledge to address the challenges that poor people face in developing and developed countries. Through a series of five online courses taught by J-PAL affiliated professors and MIT professors of economics, learners gain a firm foundation in microeconomics, development economics, and probability and statistics, and engage with cutting-edge research in the field. The program launched in winter 2017 with over 9,000 students establishing a MicroMasters profile and taking courses, and 726 paying for proctored exams toward a MicroMasters certificate. The DEDP MicroMasters is unique in its focus on the practicalities of running randomized evaluations to assess the effectiveness of social programs and in its emphasis on hands-on skills in data analysis.
The department hosted two department-wide lectures for faculty and graduate students. During the fall semester, Xavier Gabaix, the Pershing Square Professor of Economics and Finance at Harvard University, delivered a lecture titled “Economics with Bounded Rationality: Basic Microeconomics and Public Finance.” The spring departmental lecture was given by David Card, the Class of 1950 Professor of Economics at the University of California, Berkeley, who delivered a lecture titled “What do Editors Maximize? Evidence from Four Leading Economics Journals.”

Research and Publications

Faculty members have carried out research on a broad array of frontier topics in economics, and attracted notice within the academic sphere and, in many cases, from the national and international press. A selection of publications during the academic year illustrates the scope of the department’s research activities.


Arnaud Costinot published “Nonparametric Counterfactual Predictions in Neoclassical Models of International Trade” (with Rodrigo Adao and Dave Donaldson) in the *American Economic Review*.


Amy Finkelstein and Heidi Williams published “Sources of Geographic Variation in Health Care: Evidence from Patient Migration” (with Matthew Gentzkow) in the *Quarterly Journal of Economics*, and “Adjusting Risk Adjustment—Accounting for Variation in Diagnostic Intensity” (with Matthew Gentzkow and Peter Hull) in the *New England Journal of Medicine*.

Drew Fudenberg published “Whither Game Theory? Towards a Theory of Learning in Games” (with David Levine) in the *Journal of Economic Perspectives* and “Bayesian Posteriors for Arbitrarily Rare Events” (with Kevin He and Lorens A. Imhof) in the *Proceedings of the National Academy of Sciences*.

Jonathan Gruber published “Premium Subsidies, the Mandate and Medicaid Expansion: Coverage Effects of the Affordable Care Act” (with Molly Frean and Benjamin Sommers) in the *Journal of Health Economics*, and “Disentangling the ACA’s Coverage Effects: Lessons for Policymakers” (with Molly Frean and Benjamin Sommers) in the *New England Journal of Medicine*.

Bengt Holmstrom published “Banks as Secret Keepers” (with Tri V. Dang, Gary Gorton, and Guillermo Ordoñez) in the *American Economic Review*. 
Mihai Manea published “Social Status in Networks” (with Nicole Immorlica, Rachel Kranton, and Greg Stoddard) in the American Economic Journal: Microeconomics.

Whitney Newey and Jerry Hausman published “Individual Heterogeneity and Average Welfare” in Econometrica.


Nancy Rose published “Economics at the Antitrust Division 2015–2016: Household Appliances, Oil Field Services, and Airport Slots” (with Randy Chugh, Nathan Goldstein, Eric Lewis, Jeffrey Lien, and Deborah Minehart) in the Review of Industrial Organization.


Alexander Wolitzky published “Capital Taxation under Political Constraints” (with Florian Scheuer) in American Economic Review and “Mechanism Design with Maxmin Agents: Theory and an Application to Bilateral Trade” in Theoretical Economics, for which he won a Best Paper award.


**Professional Service**

Numerous MIT faculty members provide leadership and service to the economics profession. Daron Acemoglu serves as a member of the Awards and Honors Committee of the American Economic Association and is a member of the Temporary Nomination Committee of the National Academy of Sciences. David Autor directs the National Bureau of Economic Research (NBER) Disability Research Center, serves as chair of the Advisory Committee on Editorial Appointments, as an executive committee member of the American Economic Association, and is on the Board of Advisors of the Opportunity and Inclusive Growth Initiative at the Federal Reserve Bank of Minneapolis. Arnaud Costinot serves as foreign editor for the Review of Economic Studies and co-editor of the Journal of International Economics. Esther Duflo is the director of the Development Program at the Center for Economic Policy Research and the editor in chief of the...
*American Economic Review.* Amy Finkelstein and Jonathan Gruber serve as program directors for public economics and health care, respectively, at the National Bureau of Economic Research. Robert Gibbons serves on the Board of Directors of the Society for Institutional and Organizational Economics and directs the working group on organizational economics at NBER. Gruber is the president-elect of the American Society of Health Economists. Bengt Holmstrom serves on the Advisory Board of the Stockholm Institute of Transition Economics at the Stockholm School of Economics. Whitney Newey serves on the Executive Committee of the Econometric Society, and he and Robert Townsend are members of the North America Council of the Econometric Society. Benjamin Olken serves on the Board of the Bureau for Research and Economic Analysis of Development, and is a co-editor for the *American Economic Journal: Applied Economics*. Parag Pathak directs the working group on market design at NBER. James Poterba is the president and CEO of NBER and a trustee of the Alfred P. Sloan Foundation.

Other faculty members continue the department’s tradition of broader public service. David Autor and James Poterba serve on the Panel of Economic Advisers for the Congressional Budget Office. Esther Duflo served as a member of the President’s Global Development Council. Amy Finkelstein serves as a member of the Congressional Budget Office’s Panel of Health Advisers. Jonathan Gruber serves on the Board of Directors of the Health Care Cost Institute. Parag Pathak serves as a member of the Scientific Board of the Institute for Innovation in Public School Choice. Nancy Rose returned to the department in 2017 after serving more than two years as deputy assistant attorney general for economic analysis in the US Department of Justice, Antitrust Division.

**Research Initiatives**

The Abdul Latif Jameel Poverty Action Lab, directed by Abhijit Banerjee, Esther, and Benjamin Olken, continues to expand the scope and influence of its research. Since its launch in 2003, J-PAL has grown into a network of 145 affiliated professors from 49 universities with six regional offices worldwide. J-PAL’s mission is to reduce poverty through research, policy outreach, and training, all in service of ensuring that policy is informed by scientific evidence. To date, J-PAL’s affiliated research faculty are leading or have completed over 844 randomized evaluations in 69 countries to find the most effective approaches to critical development issues, for example, by helping people leave extreme poverty; reducing the spread of AIDS; increasing student attendance; reducing industrial pollution; and reducing corruption in government projects. Eleven programs evaluated by J-PAL affiliates and found to be effective have been scaled up, currently reaching 300 million people worldwide. J-PAL works with governments in 11 countries to institutionalize the use of evidence in decision making.

New grants are allowing J-PAL to increase its efforts to improve research transparency and reproducibility in the field of experimental economics. With this funding J-PAL is supporting data publication and regression replications, strengthening the credibility of social science research. This builds on J-PAL’s joint work with the American Economic Association in the development, promotion, and management of the American Economic Association Experimental Registry, which currently has 352 registered projects.
In 2013, Amy Finkelstein and Harvard professor Lawrence Katz PhD ’85, established J-PAL North America within the economics department. J-PAL North America works to improve the effectiveness of social programs in North America through three core activities: research, policy outreach, and capacity building. J-PAL North America supports researchers conducting randomized evaluations, helps decision makers use research evidence in policy decisions and program design, and provides training to governments and nonprofits on impact evaluations. Since its launch four years ago, J-PAL North America has significantly expanded its activities, with a staff of over 30 full-time researchers, policy experts, and administrative professionals.

The School Effectiveness and Inequality Initiative (SEII) addresses major policy questions related to education and the workplace. Co-directed by Joshua Angrist, David Autor, and Parag Pathak, SEII focuses on the economics of education and the connections between human capital and the American income distribution. SEII works with education policy makers at the state and district level. SEII partners include the Massachusetts Department of Elementary and Secondary Education, the Boston Public Schools, the New York and Denver Public School Districts, and the Recovery School District in New Orleans. The team’s higher education partners include Nebraska’s state and community colleges and universities, and the Susan Thompson Buffett Foundation. In addition to cutting-edge research, the SEII mission includes education and training. SEII hosts postdocs; provides data access, mentoring, and financial support for many graduate students; and offers research assistantships to talented undergraduates interested in empirical economics. As a core member of the newly-launched MIT Integrated Learning Initiative, SEII continues to broaden its impact through interdisciplinary collaboration.

**Personnel**

There were 41 Economics faculty members—excluding visitors—in AY2017. This number will increase to 43 for AY2018, reflecting the arrival of two new assistant professors and one new full professor, and the departure of one untenured associate professor.

The department promoted Isaiah Andrews to the rank of associate professor without tenure, and David Atkin to the rank of associate professor with tenure. Dave Donaldson, who moved from MIT to Stanford in 2014, decided to return to MIT and rejoined the faculty on July 1, 2017 as a professor of economics. Martin Beraja, who received his PhD from the University of Chicago in June 2016, joined the department after a postdoctoral year at Princeton. Simon Jäger, who received his PhD from Harvard University in June 2016, joined the department after a postdoctoral year at Bonn University. Untenured Associate Professor Mihai Manea, left MIT and accepted a position at Stanford. In March 2017, Stephen Ross, a longtime member of the Economics Department and the Sloan School Finance faculty, passed away unexpectedly. A memorial service will be held at MIT Sloan in October 2017.

Five faculty members and four postdoctoral associates visited the MIT Economics Department for all or part of AY2017. The department’s annual visitor, Nobel Laureate Jean Tirole PhD ’82, continued his active participation, lectured in 14.271/14.272 Industrial Organization I and II, and taught an advanced seminar in economics.
Visiting faculty members played important roles in the Economics Department’s activities. Visitors included Sara Heller, assistant professor of criminology at the University of Pennsylvania, who taught 14.11 Economics of Crime; Sari Pekkala Kerr, senior research scientist at the Wellesley College Center for Women, who taught 14.03 Microeconomic Theory and Public Policy; Michal Kolesár, assistant professor of economics and public affairs at Princeton University, who co-taught 14.385 Nonlinear Econometric Analysis and 14.381 Statistical Method in Economics; Robin McKnight, associate professor of economics at Wellesley College, who taught 14.41 Public Finance and Public Policy; and Casey Rothschild, the Norma Wilentz Hess Associate Professor of Economics at Wellesley College, who taught 14.01 Principles of Microeconomics.

Several researchers also visited to work with current MIT faculty members in AY2017. They included: Costas Arkolakis, the Henry Kohn Associate Professor of Economics from Yale University; Samuel Bazzi, assistant professor of economics from Boston University; Leonardo Bursztyn, assistant professor of economics from the University of Chicago; Camilo Garcia-Jimeno, the Hal Varian Visiting Assistant Professor of Economics from the University of Pennsylvania; Mehmet Ekmecki, associate professor of economics from Boston College; Emin Karagözoğlu, assistant professor of economics from Bilkent University, Turkey; Yao Pan, the Yrjö Jahnsson Postdoctoral Fellow and assistant professor of economics at Aalto University, Helsinki; Nishith Prakash, assistant professor of economics from the University of Connecticut; and Anna Salomons, associate professor of economics from the Utrecht University School of Economics in the Netherlands.

The MIT Economics faculty includes six women—five of whom are tenured faculty members (Duflo, Finkelstein, Mikusheva, Rose, and Williams) and one senior lecturer (Sara Fisher Ellison). The share of women on the department’s senior faculty exceeds that of any other top five economics department. Associate Professor Isaiah Andrews is African American. All search committees are instructed to identify outstanding women and minority candidates for potential faculty appointments.

As part of the regular recruitment process for junior faculty during AY2017, the department solicited or received 340 curricula vitae. Twenty-eight candidates were selected for interviews, and six candidates were invited to the department to present seminars. The faculty did not vote offers to any candidates.

**Honors and Awards**

In addition to the honors described at the start of this report, many faculty members received important professional recognition. A selection of these honors includes the following:

Daron Acemoglu received an honorary doctorate from Bath University.

David Autor received the Best Professor Award from the MIT Technology and Policy Program Class of 2016. He also delivered the Inter-American Development Bank Keynote Lecture.

Abhijit Banerjee became a member of the Board of Trustees of Save the Children Federation.
Victor Chernozhukov gave the E. L. Hannan Lecture at the Australian Econometric Society Meetings in Sydney.

Esther Duflo was elected a corresponding fellow of the British Academy. She gave the Richard T. Ely Lecture at the American Economic Association Meeting, and was awarded a Doctor of Humane Letters honoris causa from Amherst College.

Amy Finkelstein gave the Hicks Lecture at Oxford University.

Parag Pathak was awarded the Social Choice and Welfare Prize (with Fuhito Kojima of Stanford) by the Society for Social Choice and Welfare.

Robert Townsend served as president of the Society for the Advancement of Economic Theory.

Heidi Williams received the Arrow Award for Best Paper in Health Economics from the International Health Economics Association.

Alexander Wolitzky received an Alfred P. Sloan Research Fellowship.

**Future Plans and Development Initiatives**

The department continues to build on its record as a leading research and teaching institution with the highest caliber senior and junior faculty, graduate students, and undergraduates. A new generation of faculty, many of whom came to MIT as assistant professors and have built their careers here, is taking on growing responsibility for department leadership. The faculty is committed to expanding the presence of economics in the undergraduate experience at MIT. The department’s new initiatives to create cross-disciplinary offerings will be evaluated and modified as needed to achieve this goal.

The Economics Department relies on gifts from alumni and other supporters to advance its research and educational mission. Top priorities include securing additional funds for graduate student support, endowing professorships, and raising funds that can be used for faculty research support. The faculty and staff will continue to work with development team members to strengthen the department’s financial base.

Nancy L. Rose  
Department Head